

# United States Patent [19]

Drews et al.

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## [54] ULTRASONIC POCKET ATOMIZER

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### Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 84,413, Aug. 10, 1987,  
abandoned.

### [30] Foreign Application Priority Data

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[51] Int. Cl.<sup>4</sup> ..... H01L 41/08

[52] U.S. Cl. .... 310/323; 310/317;  
128/200.16; 239/102.2

[58] Field of Search ..... 310/321-325,  
310/317; 239/102.2; 128/200.14, 200.16

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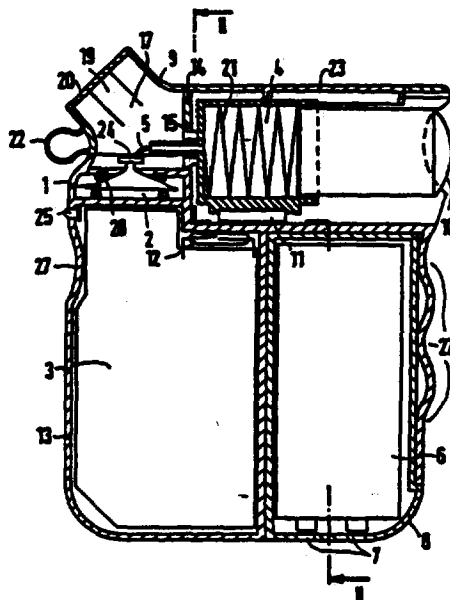
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### [57] ABSTRACT

An ultrasonic pocket-size atomizer comprises a housing including a first portion and a second portion detachably connected thereto. A vibration generation mechanism is mounted liquid-tight in the first portion of the housing for generating an oscillation with a frequency between 1 and 5 Mhz. The vibration generation mechanism includes a piezoelectric assembly and an electronic circuit operatively connected to the assembly for energizing the assembly and causing the assembly to vibrate. A power source including a storage battery is removably and rechargeably disposed in the first portion of the housing for supplying electric current to the electronic circuit. A cartridge is provided for containing liquid to be atomized, the cartridge being movably disposed in the second portion of the housing. An activation mechanism is provided for automatically activating the electronic circuit upon motion of the movable section of the cartridge, the activation mechanism including a magnet attached to the movable section of the cartridge so as to move therewith. The activation mechanism further includes a switch operatively connected to the electronic circuit and operable by the magnet upon a shift in the position thereof during motion of the movable section of the cartridge.

18 Claims, 3 Drawing Sheets



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